ABOUT MQMS

BACKGROUND

The Medicare Quality Monitoring System (MQMS) is an ongoing system that processes, analyzes, interprets and disseminates health related data to monitor the quality of care delivered to Medicare fee-for-service beneficiaries. The MQMS was initiated to provide useful information to the CMS PROs (Peer Review Organizations, currently renamed as Quality Improvement Organizations) program and has been evolved to address growing public concerns over quality of care, patient safety, provider accountability and patient choice. It is directed by the Centers for Medicare & Medicaid Services (CMS) with assistance from its contractors. MQMS development and production involves a diverse group of CMS staff, including program managers, clinical area team leaders (clinicians), epidemiologists, statisticians, and data analysts in the central and regional offices. CMS also consulted with leading experts in other federal agencies—such as the Agency for Health Care Research and Quality, the Centers for Disease Control—and in quality improvement organizations and academia.Intended Use of the MQMS Data

The MQMS is designed with the intention to support data-driven decision-making regarding quality improvement and payment/coverage policymaking. Development and production of the 2003 MQMS measures and respective methodologies were primarily aiming at providing input for broad and high-level policy making and program planning within CMS.

The 2003 MQMS describes trends, patterns, and variations in health status, disease- and procedure-specific utilization, outcomes and process of care at the national and state level that are related to CMS quality improvement program and initiatives, patient safety and payment/coverage policies. Without further analysis and manipulation of the data, the 2003 MQMS data are not intended to explain the specific causes of the trends, patterns, and variations.

- Specifically the MQMS data are to be used for:
  - Identifying potential quality problems
  - Tracking program implementation
  - Suggesting project ideas for quality improvement program
  - Targeting interventions
  - Prioritizing activities & allocation of resources

- Focusing on a particular problem
- Raising research questions/hypothesis for further investigation

- Further well-deliberated multivariate analysis is required for the MQMS data to be used for:
  - Drawing conclusions on cause-effect association between the QIOs process of care measures with the MQMS outcome measures
  - Evaluating individual QIO, providers in a state or state performance
  - Evaluating directly the effectiveness of the QIO program and other CMS quality improvement initiatives and payment/coverage policies

POPULATION AND HEALTH ISSUES EXAMINED

The population under study consists of Medicare fee-for-service (FFS) beneficiaries. MQMS is limited to FFS beneficiaries because of the current unavailability of encounter data from Medicare managed care plans. The MQMS 2003 edition monitors the following types of quality measures:

- Mortality and readmission rates, length of stay, and cost of hospitalizations for three conditions —acute myocardial infarction (AMI), heart failure and strokeProcess of care and progression of diseases for diabetes
- Mortality and readmission rates following cancer-related and cardiac-related high-risk surgical procedures
- Patient safety
- Preventable hospitalization

METHODS

The 2003 MQMS analysis is limited to the national and/or state level, presenting longitudinal and/or cross-sectional descriptive statistics for various demographic and geographic subgroups. The results of MQMS 2003 edition are age-sex adjusted and not risk adjusted. The age-sex adjustment eliminates state-to-state and year-to-year variations in the age and sex composition but not the comorbidities or severity of illness of the population. The age-sex adjusted data preclude interpretation alluding to state or provider performance.

MQMS results are based on data from all fee-for-service beneficiaries and claims, rather than a sample of such beneficiaries and claims. This means that the rates presented in MQMS reports do not contain sampling error. MQMS rates are not presented with confidence intervals or significance testing, since these intervals and tests are based on properties of sampling error. This approach implies that the FFS population is not interpreted as a sample drawn from a super-population, such as all Medicare beneficiaries or FFS beneficiaries from another time period.

MQMS results are subject to measurement error in the CMS Denominator File and MedPar database, as well as to modeling error resulting from the age-sex adjustment. CMS continues to investigate the magnitude of these errors.

PRODUCTS

The MQMS products are a series of reports on quality measures, a set of tables on CMS' web site, plus the data files at the person and aggregate level used to generate the reports and documentation of the methodology and data processing. The reports are available on the CMS website; the data files and documentation reside on the CMS mainframe. To facilitate the use of the data and replication of the analysis, CMS makes available SAS programs and data processing documentation. Access to the data can be granted to CMS analysts on request. Other federal agencies and CMS contractors may obtain the data through a formal data request process. MQMS 2003 reports include:

- MQMS Report: Beneficiary Characteristics and Utilization, 1992-2001
- MQMS Report: Heart Failure, 1992-2001
- MQMS Report: Acute Myocardial Infarction (AMI), 1992-2001
- MQMS Report: Stroke, 1992-2001
- MQMS Report: Pneumonia, 1992-2002
- MQMS Report: Cancer-Related High-risk Surgeries I, 1992-2001
- MQMS Report: Cardiac-Related High-risk Surgeries II, 1992-2001
- MQMS Report: Patient Safety, 2000-2001
- MQMS Report: Preventable Hospitalizations, 1995-2001
- MQMS Report: Diabetes, 1992-2001